# PROCEEDINGS OF SPIE

# Sixth International Conference on Computer Information Science and Application Technology (CISAT 2023)

Huajun Dong Shijie Jia Editors

26–28 May 2023 Hangzhou, China

Organized by Dalian Jiaotong University (China)

Sponsored by
Zhejiang University of Technology (China)
Dalian Ocean University (China)
AEIC Academic Exchange Information Centre (China)

Published by SPIE

**Volume 12800** 

Part One of Two Parts

Proceedings of SPIE 0277-786X, V. 12800

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

Sixth International Conference on Computer Information Science and Application Technology (CISAT 2023), edited by Huajun Dong, Shijie Jia, Proc. of SPIE Vol. 12800, 1280001 © 2023 SPIE · 0277-786X · doi: 10.1117/12.3008760

The papers in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. Additional papers and presentation recordings may be available online in the SPIE Digital Library at SPIEDigitalLibrary.org.

The papers reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from these proceedings:

Author(s), "Title of Paper," in *Sixth International Conference on Computer Information Science and Application Technology (CISAT 2023)*, edited by Huajun Dong, Shijie Jia, Proc. of SPIE 12800, Sevendigit Article CID Number (DD/MM/YYYY); (DOI URL).

ISSN: 0277-786X

ISSN: 1996-756X (electronic)

ISBN: 9781510668546

ISBN: 9781510668553 (electronic)

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA Telephone +1 360 676 3290 (Pacific Time)

SPIE.org

Copyright © 2023 Society of Photo-Optical Instrumentation Engineers (SPIE).

Copying of material in this book for internal or personal use, or for the internal or personal use of specific clients, beyond the fair use provisions granted by the U.S. Copyright Law is authorized by SPIE subject to payment of fees. To obtain permission to use and share articles in this volume, visit Copyright Clearance Center at copyright.com. Other copying for republication, resale, advertising or promotion, or any form of systematic or multiple reproduction of any material in this book is prohibited except with permission in writing from the publisher.

Printed in the United States of America by Curran Associates, Inc., under license from SPIE.

Publication of record for individual papers is online in the SPIE Digital Library.



**Paper Numbering:** A unique citation identifier (CID) number is assigned to each article in the Proceedings of SPIE at the time of publication. Utilization of CIDs allows articles to be fully citable as soon as they are published online, and connects the same identifier to all online and print versions of the publication. SPIE uses a seven-digit CID article numbering system structured as follows:

- The first five digits correspond to the SPIE volume number.
- The last two digits indicate publication order within the volume using a Base 36 numbering system employing both numerals and letters. These two-number sets start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B ... 0Z, followed by 10-1Z, 20-2Z, etc. The CID Number appears on each page of the manuscript.

# **Contents**

xvii

Conference Committee

## Part One

#### MOBILE ALGORITHM AND INTELLIGENT BIG DATA ANALYSIS

12800 02	Prediction and analysis of in-vehicle coupon acceptance behavior [12800-60]
12800 03	Research on multi-source heterogeneous sensory data fusion methods for user feedback [12800-276]
12800 04	Industrial equipment defect detection based on multi-scale Retinex algorithm [12800-190]
12800 05	A formula calculation model of multi-additive special coating based on K nearest neighbor algorithm [12800-211]
12800 06	A strip steel surface defect detection algorithm based on YOLOv5s [12800-144]
12800 07	Simulation verification and finite element analysis of Raven-II [12800-8]
12800 08	Remote multi-point air refueling planning based on improved differential evolution algorithm [12800-48]
12800 09	Location method of transit station for rail transit based on variable step size any colony algorithm [12800-292]
12800 0A	CP-ABE access control scheme supporting data permission management in IOT [12800-55]
12800 OB	Numerical simulation study on wall interference of multi-size wind tunnel [12800-95]
12800 OC	Interleaving-mapping: a novel data layout in scratchpad memory [12800-151]
12800 OD	Accuracy comparison between decision tree and naive Bayes algorithms in large discrete dataset with incompletely independent attributes [12800-225]
12800 OE	A lightweight detection algorithm for steel surface defects based on improved YOLOv5 [12800-124]
12800 OF	An improved PSO algorithm based on stream computing and multi-swarm [12800-254]
12800 OG	Lossless compression for quality scores of genomic data based on high-throughput sequencing [12800-127]

12800 OH	Research on multi-UAV cooperative reconnaissance target information fusion algorithm [12800-227]
12800 01	Research on the application of artificial intelligence in computer networks [12800-166]
12800 OJ	Interval optimization for uncertain structure using particle swarm algorithm [12800-33]
12800 OK	Hybrid particle swarm optimization algorithm based on arena competitive learning strategy [12800-189]
12800 OL	A comparative analysis of the new nearest swarm intelligent optimization algorithm for solving numerical problems $[12800\text{-}180]$
12800 OM	Optimal design about line loss calculation system of electric power system based on the Internet of Things [12800-68]
12800 ON	Research on intersection traffic light timing optimization system based on sine cosine algorithm $[12800\text{-}248]$
12800 00	Research on English grammar error correction algorithm based on deep learning [12800-70]
12800 OP	Clustering algorithm for micro unmanned aerial vehicle networks with multi-task objectives [12800-174]
12800 0Q	Optimization and implementation of vehicle detection algorithm for tiny objects [12800-130]
12800 OR	Improved A* algorithm for mobile robot path planning [12800-142]
12800 OS	Combined dispatching of wind, photovoltaic, thermal power, hydropower, and storage based on improved NSGA-II algorithm $[12800-10]$
12800 OT	A novel salient object detection algorithm for space debris in star images [12800-99]
12800 OU	Research on data calibration model of micro air quality monitoring station based on particle swarm optimization algorithm $[12800\text{-}132]$
12800 OV	Research on improving movie recommendation algorithm based on user behavior [12800-81]
12800 OW	Improved genetic algorithm for solving traveling salesman problem [12800-228]
12800 0X	Research on path planning problem based on improved genetic algorithm [12800-231]
12800 OY	Binocular inertial tightly coupled SLAM algorithm based on quasi constant speed model [12800-12]
12800 OZ	Research and design of fresh food traceability data collection and processing technology based on edge computing [12800-281]

12800 10	Modeling and simulation of multi-source signal navigation and location algorithm based on Kalman filtering [12800-97]
12800 11	Research on English speaking assessment algorithms based on deep learning [12800-87]
12800 12	Research on delivery cost management method of agricultural enterprises supply chain based on heuristic algorithms [12800-141]
12800 13	Study on the analysis algorithm of heart rate variability based on R-R interval [12800-22]
12800 14	Research on parking detection algorithm based on yolov8 [12800-179]
12800 15	An identical particle diffusion algorithm for multi-agent formation [12800-259]
12800 16	Research on smoke edge detection algorithm based on structure similarity index measure [12800-168]
12800 17	Resource allocation algorithm for T2T and T2G coexistence scenarios in urban rail transit [12800-171]
12800 18	Improved fast 3D reconstruction algorithm based on laser scanning point cloud [12800-175]
12800 19	Yolov5-PB: a traffic sign detection algorithm based on deep learning [12800-146]
12800 1A	A point cloud optimization algorithm based on nonadjacent low-altitude remote sensing images [12800-123]
12800 1B	AHFL-UAVs: adaptive loss isomorphism federated learning algorithm for UAV swarms [12800-126]
12800 1C	Hybridization model of frame semantics and deep learning for text semantic similarity calculation [12800-188]
12800 1D	Research on deep learning recommendation algorithm integrating user preferences [12800-58]
12800 1E	A heuristic time-sensitive networking scheduling algorithm for large-scale flows [12800-202]
12800 1F	Improvement of raft consensus algorithm based on credit values on electronic medical record (EMR) blockchain [12800-115]
12800 1G	Optimization of large unite load devices trajectory based on adaptive genetic algorithm [12800-209]
12800 1H	An improved YOLOv7 algorithm for laser welding defect detection [12800-31]
12800 11	Joint scheduling of permutation flow shop production and preventive maintenance using a reinforcement learning algorithm [12800-241]

#### WIRELESS COMMUNICATION DETECTION AND NETWORK SECURITY MANAGEMENT

12800 1J	Emergency repair scheduling algorithm for multi-point fault of power communication considering multi team cooperation [12800-192]
12800 1K	A blockchain- and ABE-based scheme for data security and data sharing [12800-17]
12800 1L	Revocable multi-authority attribute-based encryption from lattice in cloud storage [12800-149]
12800 1M	UWB indoor localization using deep aggregation network [12800-277]
12800 1N	Collusion resistant identity-based proxy re-encryption scheme on lattice [12800-205]
12800 10	Short text classification model based on dynamic routing and CNN with attention mechanism [12800-153]
12800 1P	Research and application of comprehensive risk assessment system for the whole mine [12800-38]
12800 1Q	Two-layer generalization boosting model for anomaly detection of e-commerce orders [12800-267]
12800 1R	Intrusion detection model for software-defined networking based on feature selection [12800-120]
12800 1S	A common gateway for interoperability in multi-architecture LVC simulation [12800-88]
12800 1T	Lightweight blockchain-based technique for detection and prevention man in the middle attacks in mobile edge computing environment [12800-257]
12800 1U	Research on network intrusion detection based on SMOTEENN and improved CatBoost algorithm [12800-73]
12800 1V	DDoS attack detection based on LSTM-GRU in SDN environment [12800-129]
12800 1W	Method for selecting defense strategy of moving targets based on signal game in industrial internet [12800-134]
12800 1X	Concrete surface crack detection method based on improved deformable convolution with YOLOv5 [12800-7]
12800 1Y	Anomaly detection of EEG in patients with epilepsy based on graph deviation network [12800-198]
12800 1Z	Short-term power load forecasting based on multi-step probability distribution deep learning network [12800-207]
12800 20	A secure and lightweight implementation scheme for Internet of Things device management based on ZUC algorithm [12800-143]

12800 21	Machine learning applied to failure detection [12800-210]
12800 22	Research and application of residual local blueprint separable network for lightweight image super-resolution [12800-215]
12800 23	Discussion on the evolution scheme of power communication network from PTN to SPN [12800-25]
12800 24	Research on satellite communication transmission model based on meteorological message information [12800-74]
12800 25	Route planning based on 3D single model and power grid GIS platform [12800-64]
12800 26	Research and application of network security detection technology based on computer vision $[12800\text{-}83]$
12800 27	Efficient transformer for human-object interaction detection [12800-108]
12800 28	Application of machine learning algorithm in intrusion detection technology [12800-287]
12800 29	Research on technical architecture and service models of the internet open platform [12800-147]
12800 2A	Blockchain-based supply and demand system for matching transactions [12800-152]
12800 2B	A study on privacy protection technology for cross-border transactions based on blockchain technology [12800-67]
12800 2C	Research on the IP telephone power line carrier without wiring access [12800-69]
12800 2D	Mixed DSP packing method for convolutional neural network on FPGA [12800-160]
12800 2E	A mapping and principal component dimensionality reduction analysis neural network for structured multi-classification [12800-107]
12800 2F	Research on image features extraction based on graph convolutional network [12800-177]
12800 2G	Gen Z image and precision analysis of online games big data based on the web crawler technology [12800-256]
12800 2H	Research on traffic sign detection based on improved YOLOv4 [12800-51]
12800 21	Attribute-based chameleon signature for asymmetric group key agreement [12800-85]
12800 2J	Enhancing security in smart homes with IoT using logit-boosted techniques [12800-86]
12800 2K	Delay optimization method of railway time synchronization network based on delay jitter

12800 2L	A laser welding defect detection model based on improved YOLOv5 [12800-4]
12800 2M	Research on traffic flow prediction based on spatio-temporal convolutional networks with attention mechanism [12800-294]
12800 2N	Research on evaluation model of new power system information communication digitalization ability [12800-150]
12800 20	A multi-threaded virtual DOM difference method based on web worker [12800-18]
12800 2P	BC-GFL: blockchain-based graph federated learning [12800-148]
12800 2Q	Breast lesion detection in mammograms based on unsupervised convolutional neural network [12800-229]
12800 2R	Research on blockchain covert communication scheme based on transaction mechanism [12800-154]
12800 2S	A data encryption method for wireless sensor networks based on national security algorithm [12800-286]
	MACHINE PERCEPTION AND BIOMETRIC RECOGNITION
12800 2T	Research on motion recognition method in college dance teaching based on deep learning [12800-80]
12800 2U	Recognition of sectional line loss anomaly in low-voltage substations based on multidimensional feature constrained clustering [12800-42]
12800 2V	ConvMixer with large kernel: an efficient architecture for classifying the EEG of imagined speech [12800-49]
12800 2W	Fast keyword query method over fuzzy RDF graph [12800-57]
12800 2X	Deep network for emotion recognition [12800-62]
12800 2Y	Prediction of frequencies of drug side effects using social recommendation algorithm based on multi-feature fusion $[12800-52]$
12800 2Z	Research on key technologies of speech recognition based on deep learning [12800-145]
12800 30	Dataset collecting for UWB NLOS identification based on machine learning [12800-109]
12800 31	Design of risk assessment model for high proportion clean energy electricity spot market based on CEEMDAN-LSTM [12800-39]
12800 32	Dependency parsing masking and BERT for sentiment analysis [12800-96]

12800 33	Cervical cancer segmentation based on full-scale feature fusion with cascading-attention and dilated convolution $[12800-9]$
12800 34	Research on proton radiography denoising based on deep learning [12800-186]
12800 35	Analysis of bamboo resource survey application based on remote sensing images [12800-105]
12800 36	Creative product design of ceramic technology culture integrated with machine learning [12800-167]
12800 37	Visualization of hydrophone research fields using Citespace [12800-72]
12800 38	Ecological sensitivity evaluation and ecological restoration of rocky desertification area based on GIS: a case study of Lingui District, Guilin City, Guangxi Province [12800-291]
12800 39	Lightweight image recognition of peach tree pests based on global context modeling [12800-255]
12800 3A	Structural modelling of rotary three-dimensional braiding preforms [12800-104]
12800 3B	Application of long-short term memory network in mine leakage protection line selection [12800-156]
12800 3C	Research on evaluation and prediction method of consumer satisfaction based on convolutional neural networks [12800-121]
12800 3D	Research on improving TransUnet network for feature classification [12800-173]
12800 3E	Confinement efficiency of fiber reinforced polymer-confined noncircular concrete columns: statistical analysis [12800-30]
12800 3F	The study of RX software identification number management strategy [12800-226]
Part Two	
12800 3G	A single-channel EEG sleep staging method based on empirical Fourier decomposition [12800-59]
12800 3H	The research on reflooding heat transfer in nuclear reactor large break loss of coolant accident [12800-293]
12800 31	Research on deceptive dynamic defense method based on SDN [12800-279]
12800 3J	A cloud edge collaboration framework for fire detection model training [12800-203]
12800 3K	Intelligent learning application based on optical character recognition and personalized recommendation algorithms [12800-242]

12800 3L	Chinese knot Identification via YOLOv5 [12800-214]
12800 3M	GN-CycleGAN: artistic style transfer with gradient normalization and cycle generative adversarial networks [12800-262]
12800 3N	Eggplant recognition algorithm based on improved YOLOv7-obb [12800-19]
12800 30	Multimode hydropower power prediction based on long short-term memory [12800-233]
12800 3P	Exploration of global temperature warming based on deep learning and statistical analysis [12800-14]
12800 3Q	Research on dynamic and static grassland fire identification based on UAV images [12800-113]
12800 3R	Spatial distribution characteristics of community service facilities in Shangcheng District of Hangzhou, China [12800-162]
12800 3S	Identification and characterization of volcanic channels in fissure eruption [12800-71]
12800 3T	Research on carotid artery B-ultrasound plaque recognition based on deep learning [12800-157]
12800 3U	Target recognition method for Guangdong-Hong Kong-Macao Greater Bay Area port based on deep residual neural network [12800-270]
12800 3V	Image stitching method based on asphalt pavement potholes [12800-260]
12800 3W	Gas turbine health status assessment based on BP neural network [12800-230]
12800 3X	Restoration of motion-blurred star image based on improved MIMO-UNet [12800-194]
12800 3Y	Research on image features classification based on graph convolutional neural network [12800-253]
12800 3Z	A noise-handling method based on textual entailment model [12800-135]
12800 40	Enhanced coordinate attention network with centralized visual center for infrared small target detection [12800-176]
12800 41	Application method of computer image processing technology in visual communication design [12800-6]
12800 42	Where the TinyPerson escapes: SOLEnet small object location estimates from coarse to fine [12800-53]
12800 43	RSGD: a behavior and social based aroun discovery method [12800-54]

12800 44	Facial expression classification based on LDA-GS-SVM [12800-271]
12800 45	A feature integration method for Chinese chunking [12800-114]
12800 46	Sparse multi-channel EMG signal gesture recognition based on multi-view deep learning [12800-232]
12800 47	Topic opinion leader identification based on latent Dirichlet allocation topic model [12800-182]
12800 48	Operational optimization of a global ocean wave numerical forecasting system based on the spherical multiple-cell grid $[12800\text{-}65]$
	INTELLIGENT MULTIMEDIA PROGRAMMING AND KNOWLEDGE ACQUISITION
12800 49	Distributed conditional arithmetic coding based on adaptive source-symbol purging [12800-131]
12800 4A	Optimal structure exploration of Bayesian network based on dealing with the route choice model [12800-169]
12800 4B	A smart contract trading model between renewable energy generations and flexible loads [12800-265]
12800 4C	Generation of trustworthy attribute knowledge graph based on semantic analysis [12800-247]
12800 4D	Research on quality estimation of Chinese-English translation based on machine learning [12800-76]
12800 4E	Research on arrival aircraft sequencing based on reinforcement learning [12800-56]
12800 4F	Research and implementation of key technologies of simultaneous interpreting speech translation [12800-100]
12800 4G	Data-driven tertiary English learning: a study of the application of self-built corpus for teaching EFL reading [12800-35]
12800 4H	A study of keyword extraction for short news documents [12800-44]
12800 41	Big five personality prediction based on pre-training language model and sentiment knowledge base [12800-172]
12800 4J	Extraction of burned area and monitoring of vegetation restoration in Qipan Mountain [12800-94]
12800 4K	Cloud resource computing power allocation method based on distributed multi-layer deep learning [12800-178]

12800 4L	Mechanism mathematical model induced smart control for BIOCIS waste water treatment system [12800-261]
12800 4M	Scheduling cloud service experts with search heuristic [12800-237]
12800 4N	Student performance knowledge tracking model integrating forgetting behavior [12800-196]
12800 40	A spatio-temporal graph representation model based on shapelets [12800-266]
12800 4P	High speed and low storage cost name lookup based on field programmable gate array [12800-238]
12800 4Q	Lqscomp: an efficient quality score compression method based on run length coding and mapping [12800-159]
12800 4R	A network for ultrasound video object segmentation [12800-34]
12800 4S	Weakly supervised part segmentation of 3D models based on sphere node graph [12800-235]
12800 4T	Application research on continuous integration and deployment based on Kubernetes [12800-183]
12800 4U	Research on artificial intelligence generated audio [12800-272]
12800 4V	Research and application of image inpainting based on vision transformer and generative adversarial networks [12800-220]
12800 4W	Finite-time anti-disturbance tracking control for flexible manipulator based on backstepping method and disturbance observer [12800-11]
12800 4X	Research on multi-hop question answering algorithm based on knowledge graph [12800-98]
12800 4Y	Road pothole extraction method based on improved normal vector distance [12800-163]
12800 4Z	Image retrieve for dolphins and whales based on EfficientNet network [12800-264]
12800 50	Research on user correlation of intelligent connected vehicles based on convolutional neural network [12800-269]
12800 51	Algorithm for extracting point-like independent houses from remote sensing images based on YOLOX [12800-224]
12800 52	Research on DV-Hop localization algorithm of sensor nodes optimized by cuckoo search algorithm based on quantum behavior [12800-110]
12800 53	The binary classification of CT images of pneumonia realized by machine learning [12800-63]
12800 54	A control method for a hidirectional vehicular platoon via a disturbance observer [12800-204]

12800 55	Importance evaluation method for complex network nodes based on third-order K-shell [12800-16]
12800 56	Multi-angle SAR image registration based on Demons [12800-118]
12800 57	Elastic aggregation of network flows based on date field clustering [12800-184]
12800 58	Predicting NSCLC Cox proportial hazard with 3D Transformer and DeepSurv [12800-187]
12800 59	Calibration using knowledge graph attributes in recommender systems [12800-216]
12800 5A	Research and practice of extraction technology for ice-cover-prone micro-topography in Guizhou [12800-45]
12800 5B	Improvement and application of sparrow search algorithm [12800-26]
12800 5C	Graphical visualization analysis of spatio-temporal interaction evolution of innovation space based on geographic information system: taking Shanghai, Nanjing, and Hangzhou regions as examples [12800-165]
12800 5D	Sentiment analysis using multi-neighborhood representation learning embeddings: graph convolutional neural networks [12800-191]
12800 5E	Research on semantic segmentation method of road scenes based on deep learning [12800-236]
12800 5F	Multi-objective request scheduling algorithm based on cuckoo search [12800-29]
12800 5G	Performance optimization methods for large scene in WebGL [12800-28]
12800 5H	Construction and application of knowledge graph for dispatching training [12800-43]
12800 51	Multi-modal assisted knowledge distillation for 3D question answering [12800-258]
12800 5J	Word game prediction and difficulty classification based on machine learning [12800-92]
	AUTOMATION SOFTWARE AND COMPUTER AIDED DESIGN
12800 5K	Research on echo model of project organization capability system evolution based on computer simulation technology $[12800-77]$
12800 5L	Design and implementation of a digital protection platform for Beijing carved lacquer in a web environment $[12800-79]$
12800 5M	Advances in automatic layout design based on generative adversarial networks [12800-46]

12800 5N	Research on high frequency fault prediction of elevator based on combined model [12800-117]
12800 50	Sequential music recommendation based on self-attention mechanism and content characteristics [12800-195]
12800 5P	A method to web application taint analysis by computing data dependency [12800-102]
12800 5Q	Modeling of polarized radiation transmission of skylight and simulation software design [12800-201]
12800 5R	Design and implementation of full-LCD virtual instrument graphical user interface based on GL Studio [12800-13]
12800 5S	Design and implementation of human resource management system based on Saas model [12800-199]
12800 5T	Autonomous navigation and path planning for Tiago robot [12800-136]
12800 5U	Research on optical channel monitoring information acquisition system based on software defined network [12800-200]
12800 5V	Real-time fault diagnosis of photovoltaic modules for integrated energy systems based on YOLOv7 [12800-197]
12800 5W	Calculation of bubble and dew point temperature of solution at low pressure based on MATLAE software [12800-106]
12800 5X	Design of intelligent beehive based on single chip microcomputer [12800-223]
12800 5Y	A transit network design and frequency setting model with graph neural network and deep reinforcement learning [12800-40]
12800 5Z	A guardian system for the elderly living alone based on Zigbee wireless ad hoc network [12800-155]
12800 60	Application load prediction model based on SA-IPSO-BiLSTM [12800-245]
12800 61	Research on electronic power allocation mechanism based on artificial intelligence [12800-101]
12800 62	Intelligent parking big data cloud platform algorithm research and application [12800-213]
12800 63	Analysis and design of web-based college sports information system [12800-27]
12800 64	Efficient obstacle avoidance and path planning for mobile agent through complicated environments [12800-66]
12800 65	Comprehensive exploration of UNet adaptations for improved COVID-19 CT segmentation [12800-244]

2800 66	Design and verification of AES encryption algorithm based on hardware agile development [12800-206]
2800 67	Optimization of contact parameters of bolted joint surfaces based on fractal theory [12800-250]
2800 68	Research and implementation of a personnel management system for private universities in China based on Java [12800-32]
2800 69	Research on concept drift data stream classification based on adaptive online broad learning system [12800-3]
2800 6A	Development of virtual motor integrated state platform based on data driven and LSTM [12800-218]
2800 6B	Design and implementation of verification device for dissolved oxygen tester [12800-219]
2800 6C	Simulation of autonomous inspection robot application based on ROS [12800-21]
2800 6D	Design and research of robot wire shearing system based on vision positioning [12800-20]
2800 6E	Design and implementation of design platform for automatic generated micro-application system based on domain model [12800-221]
2800 6F	Research and design of equipment system capability comprehensive estimation technology based on multi-method fusion [12800-217]
2800 6G	An intelligent operation ticket system based on typical interval and secondary equipment antimisoperation [12800-5]
2800 6H	Research on energy-efficient speed control for automatic train operation based on dueling-DQN algorithm [12800-75]
2800 61	Semantic object assisted loop closure detection for indoor UAV [12800-181]
2800 6J	Architecture design and key technology analysis of military logistics cloud platform [12800-90]
2800 6K	Micro-frontend architecture base [12800-37]
2800 6L	Study on ARM-oriented architecture open source PaaS components migration technologies [12800-263]
2800 6M	Performance testing of intel chips based on Kylin and GCC environments [12800-185]
2800 6N	Research on distributed radiation source collaborative localization technology based on unmanned aerial vehicle platform [12800-284]
2800 60	A prediction method of product machining accuracy based on domain adaption [12800-234]

12800 6P	Deep reinforcement learning for unmanned aerial vehicles cluster task allocation [12800-112]
12800 6Q	Research on LoRa-based carbon emission monitoring system [12800-61]
12800 6R	Design and implementation of an automated PDF drawing statistics tool based on Python [12800-78]
12800 6S	A hybrid model of LightGBM and xDeepFM for the prediction of malware infection [12800-290]

## **Conference Committee**

Conference General Chair

**Huajun Dong**, Dalian Jiaotong University (China)

Technical Program Committee Chairs

**Xiangjie Kong**, Zhejiang University of Technology (China) **Hong Yu**, Dalian Ocean University (China)

**Publication Chair** 

**Shijie Jia**, Dalian Jiaotong University (China)

**Organizing Committee Chairs** 

**Shubin Yan**, Zhejiang University of Water Resources and Electric Power (China)

Tao Ning, Dalian Minzu University (China)

#### Organizing Committee Members

**Hu Sheng**, Dalian Jiaotong University (China)

Rui Li, Dalian Jiaotong University (China)

Guilin Li, Dalian Jiaotong University (China)

J. Z. Zhu, South China University of Technology (China)

Weiguo Ying, Dalian Jiaotong University (China)

X. Y. Chen, Dalian Jiaotong University (China)

**Xinying Mu**, Dalian Ocean University (China)

**Yunxia Luo**, Zhejiang University of Water Resources and Electric Power (China)

**Qinggang Yang**, Zhejiang University of Water Resources and Electric Power (China)

X. S. Wu, Zhejiang University of Water Resources and Electric Power (China)

**Yang Cui**, Zhejiang University of Water Resources and Electric Power (China)

**Chuanhui Zhu**, Zhejiang University of Water Resources and Electric Power (China)

**Chen Chen**, Zhejiang University of Water Resources and Electric Power (China)

#### Technical Program Committee

Jie Zeng, Dalian Jiaotong University (China)
Zhaolong Ning, Chongqing University of Posts and
Telecommunications (China)

Yuanshan Lin, Dalian Ocean University (China) Kewei Zhang, Dalian Jiaotong University (China) Wei Zheng, Dalian Jiaotong University (China)

Yanguo Jing, Leeds Trinity University (United Kingdom)

Vijayakumar Varadarajan, University of New South Wales (Australia) Johan Debayle, Ecole Nationale Supérieure des Mines de Saint-Etienne (France)

Xiaohao Cai, University of Southampton (United Kingdom)
Jiang Zhu, Tokyo Institute of Technology (Japan)
Chinthaka Premachandra, Shibaura Institute of Technology (Japan)
Thippa Reddy Gadekallu, Vellore Institute of Technology (India)